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APPLICATION NO.	FILING DATE	FIRST-NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,547	03/26/2004	Patrick Thompson	2316.926USRE	9367
23552	7590	04/18/2006	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			CONNELLY CUSHWA, MICHELLE R	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,547

Applicant(s)

THOMPSON ET AL.

Examiner

Michelle R. Connelly-Cushwa

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 January 2006.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 35-49 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☒ Claim(s) 35 and 36 is/are allowed.
 6) ☒ Claim(s) 1, 4-10, 12-16 and 37-49 is/are rejected.
 7) ☒ Claim(s) 2, 3 and 11 is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 15 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 1/26/06
 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) ☐ Notice of Informal Patent Application (PTO-152)
 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

Applicant's Amendment filed January 25, 2006 has been fully considered and entered.

Information Disclosure Statement

The prior art documents submitted by applicant in the Information Disclosure Statement filed on January 25, 2006 have all been considered and made of record (note the attached copy of form PTO-1449).

Drawings

Twenty-one (21) sheets of formal drawings were filed on February 15, 2006 and have been accepted by the Examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Petrunia (US 5,212,761).

Regarding claim 1; Petrunia discloses a connection module (10) in Figures 1 and 2, the connection module (10) comprising:

- a housing including
 - o a front (16, 17),

- two mounting flanges (the mounting flanges extend from the tops and bottoms of front panels 16 and 17, wherein push fasteners 34 are located in holes in the mounting flanges),
- a rear of the housing spaced apart from the front (the rear of the housing is the curved wall of the module);
- a top (13) spaced apart from a bottom (15), the top and bottom spaced apart from the mounting flanges, and
- opposed spaced apart sides (11, 12);
- a plurality of connection locations having exposed openings along the front (connectors, 20 and 30, are located at the plurality of connection locations);
- the bottom, the rear, and the opposed sides defining a cable notch region (the cable notch region is channel 14), wherein the cable notch region defines an opening (port 40) for receiving a first cable (21); and
- a cable clamp (22) extending from the rear (the rear is defined by the curved wall and the cable clamp (22) extends towards the front from the rear of the module) in the cable notch region (the Examiner notes that "the cable notch region" is a broad term that includes the region within and surrounding the cable notch).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petrunia (US 5,212,761).

Regarding claims 4-6; In the embodiment illustrated by Petrunia in Figures 1 and 2, the connection locations include a plurality of adapters, and a first cable (21) is connected to the housing by the clamp (22), and interior cables are optically connected to the adapters. Petrunia does not specifically state that the interior cables are optically connected to a splice/coupler/splitter and that a splice/coupler/splitter is optically connected to the first cable, however, Petrunia further teaches that splice trays, optical splitters and other components could be provided within the housing as needed (see column 4, lines 10-13). Therefore, one of ordinary skill in the art would have found it obvious to incorporate a splice or splitter in the modules disclosed by Petrunia, wherein the interior cables are optically connected to the splice or splitter and the splice or splitter is optically connected to the first cable, as suggested by Petrunia, in order to maintain optical connections between the adapters and the cable as desired, including replacing broken and/or damaged portions of optical fiber on the interior of the module and appropriately dividing/combining optical signals as needed. Splices and splitters are optical couplers.

Regarding claim 7; Petrunia suggests all of the limitations of claim 7 as discussed above, except for specifically stating that the optical coupler/splitter is a wavelength division multiplexer. Wavelength division multiplexers are well known

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splitters/combiners in the art. One of ordinary skill in the art would have found it obvious to incorporate a wavelength division multiplexer, as the splitter suggested by Petrunia, in the invention of Petrunia in order to split the optical signals as desired, since wavelength division multiplexers are well known optical splitters and Petrunia teaches that splitters may be incorporated.

Regarding claims 8 and 9; Petrunia suggests all of the limitations of claims 8 and 9, as applied above, except for specifically teaching that a splice is located between the first cable and a splitter/wavelength division multiplexer. Since Petrunia suggests that splice trays, optical splitters and other components could be provided within the housing as needed (see column 4, lines 10-13), one of ordinary skill in the art would have found it obvious to use any combination of these elements as needed. Therefore, one of ordinary skill in the art would have found it obvious to incorporate a splice between the first cable and a splitter in the invention Petrunia in order to maintain optical connections between the splitter and the cable as desired, including replacing broken and/or damaged portions of optical fiber on the interior of the module and appropriately dividing/combining optical signals as needed. As discussed with respect to claim 7, wavelength division multiplexers are well known splitters and one of ordinary skill in the art would have found it obvious to incorporate a wavelength division multiplexer as the splitter suggested by Petrunia in the invention of Petrunia.

Claims 10, 12-16 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larson et al. (US 5,975,769) in view of Petrunia (US 5,212,761).

Regarding claim 1; Larson et al. discloses a connection module in Figures 1-5, the connection module comprising:

- a housing including
 - o a front (1 or 30),
 - o two mounting flanges (the mounting flanges extend from the tops and bottoms of front, 1 or 30, wherein push fasteners, 2 or 31, are located in holes in the mounting flanges),
 - o a rear (10b) of the housing spaced apart from the front;
 - o a top (10a) spaced apart from a bottom (10a), the top and bottom spaced apart from the mounting flanges, and
 - o opposed spaced apart sides (11);
- a plurality of connection locations having exposed openings along the front (4, 32); and
- the bottom, the rear, and the opposed sides defining a cable notch region, wherein the cable notch region defines an opening for receiving a first cable.

Larson et al. does not specifically disclose a cable clamp extending from the rear in the cable notch region.

Petrunia discloses a connection module having a clamp extending from a rear of the module toward the front of the module for additionally securing and locating an optical fiber relative to a passageway or channel of a notch region, wherein the clamp (22) is located at the end of the guiding channel. One of ordinary skill in the art would

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have found it obvious to incorporate a clamp at the end of the fiber passage way (23) in the invention of Larson, so that the clamp is located in a similar manner as that taught by Petrunia to better secure and locate the optical fiber cable relative to the notch region.

Regarding claims 10, 14, 40-43; Larson et al. discloses a connection module in Figures 1-5, the connection module comprising:

- a housing including an interior defined by
 - o a front portion (front plate, 1),
 - o a rear portion spaced apart from the front (rear wall, 10b);
- a plurality of connection locations having exposed openings disposed in the front portion (plurality of apertures to receive the FC fiber optic adapter, 3);
- a lower portion (10a) having a direct opening into the interior of the housing, the opening sized to receive a fiber optic cable (see column 4, lines 46-51);
- wherein interior cables are optically connected between the fiber optic cable and the connection locations;
- wherein adapters (3) are positioned at the connection locations, the interior cables being connected to the adapters;
- wherein the front portion is substantially parallel to the rear portion;
- wherein the opening defines a plane, the plane being substantially perpendicular to the front and rear portions.

Larson et al. does not specifically disclose a fiber optical cable being physically connected to the housing of the module by a clamp or an embodiment including a splicing component disposed at least partially between the connection locations and the rear portion, the splicing component configured to optically connect a fiber optical cable that is connected to the module to interior cables that are optically connected between the splicing component and the connection locations.

Petrunia discloses a connection module having a clamp extending from a rear of the module toward the front of the module for additionally securing and locating an optical fiber relative to a passageway or channel of a notch region, wherein the clamp (22) is located at the end of the guiding channel. One of ordinary skill in the art would have found it obvious to incorporate a clamp at the end of the fiber passage way (23) in the invention of Larson, so that the clamp is located in a similar manner as that taught by Petrunia to better secure and locate the optical fiber cable relative to the notch region.

Petrunia further teaches that splice trays, optical splitters and other components could be provided within the housing of a connection module as needed (see column 4, lines 10-13). Therefore, one of ordinary skill in the art would have found it obvious to incorporate a splicing component in the module disclosed by Larson, wherein the interior cables are optically connected to the splicing component and the splicing component is optically connected to the first cable, as suggested by Petrunia, in order to maintain optical connections as desired, including replacing broken and/or damaged

portions of optical fiber on the interior of the module and appropriately dividing/combining optical signals as needed.

Regarding claim 12; the connection module further includes a surface (the front surface, 1 or 30) having a mounting locations (the mounting locations includes push fasteners, 2 or 31), the mounting locations adapted to removably mount the housing to a frame.

Regarding claims 13 and 15; the splicing component comprises a splice, and the splice would be inherently be disposed between the front and rear portions when the splice is incorporated within a housing of a connection module as suggested by Petrunia.

Regarding claim 16; the clamp (22) taught by Petrunia comprises a cable attachment member (22) that is adapted to attach a fiber optic cable (21) to the housing.

Regarding claims 37, 38, 44, 46, 47 and 49; the opening is a downward facing opening that is fully circumscribed in the module of Larson et al.

Regarding claims 39, 45 and 48; Larson et al. does not explicitly state that the opening is sized to receive at least two fiber optic cables, however, one of ordinary skill in the art would have found it obvious to place whatever number of cables fit into the module through the opening, including two or more, depending on the particular cables being used, in order to organize multiple cables, since cables of varying sizes are known and used in the art, since Larson et al. also does not state that only one optical cable can be used, and since it appears that the invention would perform equally well regardless.

Allowable Subject Matter

Claims 2, 3 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 35 and 36 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art cited on attached form PTO-892 is the most relevant prior art known, however, the invention of claims 2, 3, 11, 35 and 36 distinguishes over the prior art of record for the following reasons.

Regarding claims 2 and 3; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 2, wherein the adapters are positioned at an angle having a component angle in the direction of the bottom of the housing in combination with the other limitations of claim 2. Claim 3 depends from claim 2.

Regarding claim 11; the claim is allowable over the prior art of record because none of the references either alone or in combination disclose or render obvious a connection module as defined in claim 11, wherein the adapters are positioned at an angle having a first component angle that is in the direction of the rear portion to the front portion and a second component angle that is in the direction of the lower portion in combination with the other limitations of claim 11.

Regarding claims 35 and 36; the claims are allowable over the prior art of record because none of the references either alone or in combination disclose or render

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obvious a connection module as defined in claim 35, wherein the adapters are positioned at an angle having a first component angle that is in the direction of the rear portion to the front portion and a second component angle that is in the direction of the lower portion in combination with the other limitations of claim 35. Claim 36 depends from claim 35.

Petrunia (US 5,212,761) is the closest prior art of record and the adapters are positioned parallel to the bottom of the housing and, thus, do not have a component angle in the direction of the bottom of the housing. It would not have been obvious to position the adapters at an angle having a component angle in the direction of the bottom of the housing in Petrunia, since such an arrangement would require the dimensions of the module to be larger to accommodate the same number of adapters, since portions of the adapters would be slanted up or down, or since less adapters would fit in a module having the same dimensions.

Hence, there is no reason or motivation for one of ordinary skill in the art to use the prior art of record to make the invention of claims 2, 3, 11, 35 and 36.

Response to Arguments

Applicant's arguments filed January 25, 2006 have been fully considered but they are not persuasive.

Regarding prior art rejections to claim 1 under 35 U.S.C. 102(b) over Petrunia:

Applicant states that claim 1 recites a housing having a bottom, a top, a rear, and a front; and that the bottom, the rear, and the sides define a cable notch region, wherein the cable notch region defines an opening for receiving a cable and a clamp extends from the rear in the cable notch region. Applicant further states that they have particularly defined the cable notch region as the region defined by the bottom, rear, and sides; that the opening is in the cable notch region; and that the opening is required to be in the region defined by the bottom, rear, and sides. Applicant states that the port (40) of Petrunia is within a region defined by the top and sides.

The module of Petrunia includes a front, top, bottom, opposing sides and a rear, wherein the rear is the curved wall opposing the front panels (16 and 17). The cable notch region of Petrunia is the region including and surrounding channel 14, wherein that region extends from the bottom (15) along the rear (the curved wall) and is located between opposing sides (11 and 12). Therefore, the bottom, sides and rear define the notch region. The opening (40) is in the notch region, i.e. the region including and surrounding channel 14.

Applicant further states that in addition claim 1 requires a cable clamp "in" the cable notch region, and is required to be located in a region defined by the bottom, rear and sides.

As discussed above, the cable notch region of Petrunia is the region including and surrounding channel 14. A clamp (22) is included in that region, and that region is defined by the bottom, rear and sides, as discussed above.

Applicant further states that claim 1 requires the clamp extend from the rear of the housing.

The clamp (22) of Petrunia extends from the rear of the housing (the curved wall) toward the front of the housing. The claim language does not require the clamp to be fastened to or otherwise in contact with the rear, or that the clamp extend in a rearward direction from the housing.

It is noted that Applicant is defining the curved wall to be the "top" in the arguments pertaining to Petrunia. In contrast, the curved wall, which is located opposite the front panels, is considered to be the rear of the housing by the Examiner.

Regarding prior art rejections to claims 4-10 and 12-15 under 35 U.S.C. 103(a) over Petrunia:

Applicant states that claims 4-9 depend from claim 1 and are allowable for the same reasons as claim 1.

See the arguments addressed above.

Applicant's arguments with respect to claims 10 and 12-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning the merits of this communication should be directed to Examiner Michelle R. Connelly-Cushwa at telephone number (571) 272-2345. The examiner can normally be reached 9:00 AM to 7:00 PM, Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney B. Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general or clerical nature should be directed to the Technology Center 2800 receptionist at telephone number (571) 272-1562.

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Michelle R. Connelly-Cushwa

Michelle R. Connelly-Cushwa

Patent Examiner

April 14, 2006